

INTISARI

Tantangan perubahan lahan akibat ekspansi pembangunan sarana prasarana pendidikan di Kawasan Kampus Universitas Gadjah Mada (UGM) terus mengalami perkembangan. Sebagai akibatnya ruang terbuka semakin berkurang. Kondisi ini menyebabkan kemampuan lahan untuk menyerap air hujan semakin berkurang sehingga limpasan air permukaan meningkat, dan menyebabkan terjadinya genangan. Hal ini dibuktikan dengan adanya genangan di 15 titik pantauan saat kejadian hujan. Genangan air hujan yang ada seharusnya diresapkan semaksimal mungkin sebagai cadangan akan kebutuhan air. Tujuan dari penelitian ini untuk mengurangi genangan air hujan dengan cara meresapkan air kedalam tanah serta membuat pola penanganan kelebihan air hujan secara menyeluruh berdasarkan konsep *blue green cities* (BGC).

Penelitian dilakukan di kawasan kampus UGM dengan melakukan identifikasi terhadap pengaruh perubahan lahan terhadap kejadian genangan air hujan. Serta pola penanganan kelebihan air hujan digunakan metode infrastruktur biru-hijau dengan membangun taman resapan/bertanggung, sumur resapan/biopori, *roof garden*, *rainwater harvesting*, kolam tampungan dan saluran porous.

Terdapat 3 titik genangan tertinggi yaitu genangan 01 (Bundaran UGM), 02 (depan lapangan GSP) dan genangan 05 (Jl. Notonagoro) dan 3 titik genangan baru yang dipengaruhi oleh perubahan tata guna lahan seperti genangan titik 03 (depan Cafe dan Resto UGM), titik 04 (area mesjid kampus) dan titik 09 (Jl. Lembah UGM). Penanganan dengan membangun taman resapan/bertanggung seluas 517.740 m² dan *roof garden* seluas 9.881 m² untuk dimanfaatkan secara optimal. Kondisi eksisting baru ada 1 gedung yang memiliki atap taman yaitu Laboratorium Teknik Penyehatan di Kuningan. Hasil perhitungan kapasitas taman resapan/bertanggung pada periode ulang 5 tahun volume air hujan yang melimpas sebesar 8,14 %. Sangat direkomendasikan agar semua taman yang ada dimodifikasi menjadi taman bertanggung, selain untuk mempertahankan kawasan hijau juga dapat mereduksi titik genangan.

Kata kunci : Perubahan lahan, genangan, taman bertanggung, *blue green cities*

ABSTRACT

The expansion of building infrastructure at UGM made the land area change keep challenging. As a result open was getting smaller. This condition effected the land ability to absorb the rain water. the ability to absorb the rain water also getting lower. So, the stagnanted water improved and made flood area. It was showed that , there were 15 spots of stagnanted water should absorbed maximally as water backup for water needs. The objectives of reserach were, to minimaze the stagnanted water by absorbing it into the land and making the whole rain water surplus management pattern based on the concept of Blue Green Cities (BGC).

This research was conducted at UGM campus area to identify the effect of land change area to the stagnanted rain water and how to handle the surplus of rain water by applying blue green infrastucture, such as building the absorbing park/dike, absorbing well/biopore, roof garden, rain water harvesting, pool tank and pore channel.

There were three highest spots of stagnanted water, namely, 01 (UGM Highway), 02 (in front of GSP field) and stagnanted water 05 (Notonegoro street) and three new stagnanted water spots that was affected by the method making use change. Such as stagnanted spot 03 (in front of UGM cafe and resto). Spot 04 (campus mosque area) and spot 09 (lemba street UGM). Handling by building absorbing park/dike was 517.740 square meters and roof garden was 9.881 square meters to be used optimally. Exsisting condition, there were a park roof namely, tecnique laboratorium at kuningan. The result of whole capacity of absorbing area/dike to the volume of stagnanted water at last five years were 8,14 %. It was highly recomended that every existing area must be modified to be absorbing park/dike. It was not only to sustain the green area but also to reduce the stagnanted rain water spots.

Keywords: land change, stagnanted water, dike area, blue green cities.